

tons of damiana were shipped from the sea ports of southern Baja to destinations all over the world. Gathering the native shrub meant an increase in tortillas and frijoles to a good many families living in areas where damiana grew and jobs were scarce. But, after several years of uncontrolled harvesting and marketing, the supply was depleted. A single order from a large pharmaceutical firm for 50 tons of damiana was placed at La Paz. It was never filled. A liqueur called Creme de Damiana is manufactured in Guadalajara and is probably flavored by damiana gathered from the interior of Mexico. In Baja the natives continue to gather the shrubs in limited quantities for use as an aromatic tea. Its growth is pretty much confined to the Territory of Southern Baja where the shrubs first become noticeable a short distance south of El Arco, then continue to grow intermittently on down the peninsula to Cape San Lucas. Tips of the branches and tiny leaves and flowers, if the plant is in blossom, are boiled together to make a delicious tea. I have drunk damiana on many occasions and heartily recommend it as a refreshing, flavorful drink. The accepted measurement for making most herb teas, yerba del manzo and eucalyptus leaves excepted, is un porcion de la mano, or, a small handful of twigs and leaves to a quart of water."

Additional citations: MEXICO: Baja California: T. S. Brandegee s.n. [San Benito, 1889] (N--isotype, N--photo of type, Po--63921-type, Z--photo of type), s.n. [Soledad, Jan. 8, 1890] (G); H. S. Gentry 7768 (Ca--757127, Du--323542, Mi, N, Sd--42815, Tu--122005); Gentry & Fox 11749 (Mi); Edw. Palmer 264 (Ca--770290, F--707686, Fs, G, G, Mi, Mi, S); Shreve 6999 (F--892372, Fs, G, Mi); Sikes & Babcock 294 (Au--259160, Au--284573); J. Whitehead 645 (La, N--photo, Z--photo); I. L. Wiggins 5423 (Ca--660687, Du--251739, Du--265884, G, Gg--292595, Gg--305053, Ld, Mi, N, Po--261781, Rs--29956, Se--82598), 5522 (Ca--660961, Du--263482, G, Gg--305157, Mi, N, Po--261912, Se--84384), 7847 (Ca--665436, Du--265984, G, Mi), 15086 (Du--453234, Tu--181096), 15161 (Du--453235, Se--208880); Wiggins & Wiggins 18201 (Au--238528, Du--493655, Mi).

ADDITIONAL NOTES ON THE GENUS CASSELIA. III

Harold N. Moldenke

CASSELIA Nees & Mart.

Additional synonymy: Timotoica Moldenke in Fedde, Repert. Spec. Nov. 39: 135, sphalm. 1936. Timotocea Moldenke ex Renné, Levant. Herb. Inst. Agron. Minas 150, sphalm. 1960. Timotoua Duarte ex Moldenke, Résumé Suppl. 9: 5, in syn. 1964. Timitocia

Moldenke, *Phytologia* 15: 95, in text. 1968. *Timotecia* Moldenke ex Angely, *Fl. Anal. & Fitogeogr. Est. S. Paulo*, ed. 1, 4: 830 & xviii, sphalm. 1971.

Additional & emended bibliography: Nees & Mart., *Nov. Act. Physico-Med. Acad. Caes. Leopold.-Carol. Nat. Cur.* 11: 73, pl. 6, fig. A & B. 1823; Reichenb., *Consp. Reg. Veg.* 1: 117. 1828; D. Dietr., *Syn. Pl.* 3: 371. 1843; Walp., *Repert.* 4: 40. 1845; Schau. in A. DC., *Prodr.* 11: 527--528 & [733]. 1847; Paxt., *Fl. des Serres*, pl. 361. 1848; Paxt., *Mag. Bot.* 15: 75. 1849; Schau. in Mart., *Fl. Bras.* 9: 173--176 & 311, pl. 32. 1851; Schmitz., *Icon. Fam. Nat. Veg.* 137. 1856; Bocq., *Adansonia*, ser. 1, 2: 89, 109, 125, 126, 129, 141, 142, 153, 154, & 158 (1862) and 3: 179, 184, 185, & 237--238, pl. 16. 1863; Bocq., *Rev. Verbénac.* 89, 109, 125, 126, 129, 141, 142, 153, 154, 158, 179, 184, 185, & 237--238, pl. 16. 1863; Benth. in Benth. & Hook. f., *Gen. Pl.* 2 (2): 1148. 1876; Pfeiffer, *Nom. Bot.* 1 (1): 616. 1873; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, imp. 1, 1: 449. 1893; Briq. in Engl. & Prantl, *Nat. Pflanzenfam.*, ed. 1, 4 (3a): 158. 1894; Solered., *Bull. Herb. Boiss.*, ser. 1, 6: 628. 1898; Briq. in Chod. & Hassl., *Bull. Herb. Boiss.*, ser. 2, 4: 1165--1166. 1904; Briq. in Chod. & Hassl., *Pl. Hassler.* 2: 501--502. 1904; Dalla Torre & Harms, *Gen. Siphonog.*, imp. 1, 431. 1904; T. Peckolt, *Bericht. Deutsch. Pharm. Gesel.* 14: 465. 1904; Prain, *Ind. Kew. Suppl.* 3: 37. 1908; Solered., *Syst. Anat. Dicot. Ergänz.* 255. 1908; M. Kunz, *Anatom. Untersuch. Verb.* 60--62 & 78, fig. 4. 1911; Sandw., *Kew Bull. Misc. Inf.* 1929: 124. 1929; Junell, *Symb. Bot. Upsal.* 4: 17, 18, & 20. 1934; Moldenke in Fedde, *Repert. Spec. Nov.* 39: 129--153. 1936; Moldenke, *Chron. Bot.* 3: 311. 1937; Fedde in Just, *Bot. Jahresber.* 57 (2): 742. 1938; Fedde & Schust. in Just, *Bot. Jahresber.* 57 (2): 401. 1938; A. W. Hill, *Ind. Kew. Suppl.* 9: 54. 1938; Moldenke, *Prelim. Alph. List Invalid Names* 14. 1940; Moldenke, *Alph. List Invalid Names* 12. 1942; Moldenke, *Known Geogr. Distrib. Verbenac.*, ed. 1, 38, 40, 41, 74, & 100. 1942; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, imp. 2, 1: 449. 1946; Moldenke, *Alph. List Cit.* 1: 237 & 264. 1946; Hill & Salisb., *Ind. Kew. Suppl.* 10: 43, 233, & 251. 1947; Metcalfe & Chalk, *Anat. Dicot.* 1031--1033 & 1040. 1950; Stellfeld, *Trib. Farmac.* 19 (10): 171. 1951; Angely, *Cat. Estat. Gen. Bot. Fan.* 17: 3. 1956; Moldenke, *Biol. Abstr.* 30: 1092. 1956; Rambo, *Sellowia* 7: 260. 1956; Anon., U. S. Dept. Agr. Bot. Subj. Index 15: 14360. 1958; Anon., *Kew Bull. Gen. Index* 1929-1956, 67. 1959; G. Taylor, *Ind. Kew. Suppl.* 12: 30. 1959; Angely, *Liv. Gen. Bot. Bras.* 35 & 40. 1960; Moldenke, *Biol. Abstr.* 36: 2311. 1961; Moldenke, *Phytologia* 7: 350--352. 1961; Angely, *Fl. Bacia Paran.* 22: 39. 1962; Dalla Torre & Harms, *Gen. Siphonog.*, imp. 2, 431. 1963; Hocking, *Excerpt. Bot. A.* 6: 532. 1963; Moldenke, *Résumé Suppl.* 9: 5. 1964; F. A. Barkley, *List Ord. Fam. Anthoph.* 75, 76, 150, & 216. 1965; Moldenke, *Phytologia* 12: 6. 1965; Rambo, *Pesquis. Bot.* 21: 31 & [59]. 1965; Airy Shaw in J. C. Willis, *Dict. Flow. Pl.*, ed. 7, 205 & 1126. 1966; Moldenke, *Phytologia* 16: 95, 506, & 512. 1968; Moldenke, *Résumé Suppl.* 16: 5, 19, & 27. 1968; Anon., *Torr. Bot. Club Ind. Am. Bot. Lit.* 3: 306 & 308. 1969; Angely, *Fl. Anal. & Fitogeogr. Est. S. Paulo*, ed. 1, 1: 8 (1969),

ed. 2: xxxi (1970), and ed. 1, 4: 826, 830, 1375, iv, & xviii. 1971; Moldenke, Fifth Summ. 1: 5, 6, 147, 181, 185, 356, 423, & 424 (1971) and 2: 642, 756, 771, 856--857, & 968. 1971; A. L. Moldenke, Phytologia 23: 318. 1972; Moldenke, Phytologia 23: 435, 505, & 511. 1972; Rouleau, Taxon Index Vols. 1-20, part 1: 72. 1972; Stafleu, Internat. Code Bot. Nom. 354 & 381. 1972; Airy Shaw in J. C. Willis, Dict. Flow. Pl., ed. 8, 211 & 1156. 1973; Hegnauer, Chemotax. Pfl. 6 [Cham. Reihe 21]: 659. 1973; Troncoso, Darwiniana 18: 297, 299, 301, 306, 385--387, 408, & 411, fig. 31. 1974.

Barkley (1965) reduces Timotocia to synonymy under Casselia on page 75 of his excellent work, but regards it as a valid genus on page 76. It is most unfortunate that the Casselia of Nees and Martius (1823) should have been conserved over the Casselia of Dumortier (1822) by the International Code.

CASSELLIA CHAMAEDRYFOLIA Cham.

Additional synonymy: Timotocia chamaedryfolia (Cham.) Moldenke in Fedde, Repert. Spec. Nov. 39: 143. 1936. Timotocea chamaedryfolia (Cham.) Moldenke ex Rennó, Levant. Herb. Inst. Agron. Minas 150, sphalm. 1960. Timitocia chamaedryfolia (Cham.) Moldenke, Phytologia 16: 95, in textu. 1968.

Additional bibliography: Schau. in A. DC., Prodr. 11: 528. 1847; Schau. in Mart., Fl. Bras. 9: 175 & 311. 1851; Bocq., Adansoniana, ser. 1, 3: [Rev. Verbénac.] 238. 1863; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 449. 1893; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 158. 1894; Briq. in Chod. & Hassl., Bull. Herb. Boiss., ser. 2, 4: 1165 & 1166. 1904; Briq. in Chod. & Hassl., Pl. Hassler. 2: 501 & 502. 1904; M. Kunz, Anatom. Untersuch. Verb. 60. 1911; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 449. 1946; Moldenke, Phytologia 2: 243--244. 1947; Hill & Salisb., Ind. Kew. Suppl. 10: 233. 1947; Rambo, Sellowia 7: 260. 1956; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 449. 1960; Rennó, Levant. Herb. Inst. Agron. Minas 150. 1960; Moldenke, Phytologia 7: 351. 1961; Rambo, Pesquis. Bot. 21: 31 & [59]. 1965; Moldenke, Phytologia 16: 95. 1968; Moldenke, Résumé Suppl. 16: 27. 1968; Moldenke, Fifth Summ. 1: 147 (1971) and 2: 642 & 856. 1971.

Recent collectors have encountered this plant along roadsides in campos, in gallery margins, and "occasional among campo grasses", at altitudes of 600--1000 meters, flowering in October and November, describing it as a subshrub 40 cm. tall or an herb 15 cm. tall from a woody root. The corollas are said to have been "bluish" on Markgraf, Mello Barreto, & Brade 3166, "violet" on Oliveira 1312, "light-violet, falling by midday" on Irwin & Soderstrom 7147, and "purple with dark-violet venation" on Irwin, Souza, & Reis dos Santos 10311.

Rambo (1965) cites the following Herb. Anchieta numbers, all collected by himself in Rio Grande do Sul, Brazil: 8777, 32167, 36410, 54015, 54533, 60150, 60173, & 60198. He describes the

plant as a "Small herb, prostrate to ascending, branches dense, up to 30 cm long", found in "Moist, grassy Campos" in the "Northeasternmost Highlands only....From Goiás to RGS [=Rio Grande do Sul]" Nos. 54015 and 54533, along with 49436, are actually Verbena jordanensis Moldenke.

The actual type specimen of Casselia chamaedryfolia, Sellow 1517, deposited in the herbarium of the Botanisches Museum in Berlin, was photographed there by Macbride as his type photograph number 17576, but is now destroyed. His type photograph number 34298, distributed as C. chamaedryfolia, is actually a photograph of an isotype of C. confertiflora (Moldenke) Moldenke.

Additional citations: BRAZIL: Goiás: Irwin & Soderstrom 7147 (N, W—2454339); Irwin, Souza, & Reis dos Santos 10311 (N). Minas Gerais: Markgraf, Mello Barreto, & Brade 3166 [Herb. Jard. Bot. Rio de Jan. 40067] (N); J. E. de Oliveira 1312 [Herb. Jard. Bot. Belo Horiz. 45105] (N); Sellow 1517 [Macbride photos 17576] (F—663055—photo of type, F—photo of type, N—photo of type, Rb—photo of type, W—photo of type). State undetermined: Höringer 6561 (Z).

CASSELLIA CONFERTIFLORA (Moldenke) Moldenke

Additional synonymy: Timotocia confertiflora Moldenke in Fedde, Repert. Spec. Nov. 39: 148—149. 1936. Timotocia confertiflora Moldenke ex Angely, Fl. Anal. & Fitogeogr. Est. S. Paulo, ed. 1, 4: 830 & xviii, sphalm. 1971.

Bibliography: Moldenke in Fedde, Repert. Spec. Nov. 39: 148—149. 1936; Moldenke, Known Geogr. Distrib. Verbenac., ed. 1, 38 & 100. 1942; Moldenke, Phytologia 2: 244. 1947; Hill & Salisb., Ind. Kew. Suppl. 10: 233. 1947; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 197. 1949; Moldenke, Phytologia 5: 132. 1955; Moldenke, Biol. Abstr. 30: 1092. 1956; Moldenke, Résumé 87, 354, & 445. 1959; G. Taylor, Ind. Kew. Suppl. 12: 30. 1959; Moldenke, Résumé Suppl. 16: 5. 1968; Angely, Fl. Anal. & Fitogeogr. S. Paulo, ed. 1, 4: 830, iv, & xviii, map 1375. 1971; Moldenke, Fifth Summ. 1: 147 (1971) and 2: 642 & 857. 1971; Moldenke, Phytologia 23: 435. 1972.

The Angely (1971) publication cited above bears the date "1970" on its title-page, but was not actually published until 1971.

Felippe states that this species has underground tubers, flowers that are "roxo-avermelhadas" in color, grows in cerrado, and flowers in September. An isotype, G. Gardner 3369, deposited in the herbarium of the Naturhistorisches Museum in Vienna, was photographed there by Macbride as his type photograph number 34298 and was erroneously distributed by Field Museum as C. chamaedryfolia Cham.

Additional citations: BRAZIL: Goiás: G. Gardner 3369 [Macbride photos 34298] (F—photo of isotype, N—photo of isotype, Rb—photo of isotype, W—photo of isotype). São Paulo: Felippe 81 (W—2404952).

CASSELLIA CONFERTIFLORA var. LACINIATA (Moldenke) Moldenke

Synonymy: Timotocia confertiflora var. laciniata Moldenke in Fedde, Repert. Spec. Nov. 39: 149. 1936.

Bibliography: Moldenke in Fedde, Repert. Spec. Nov. 39: 149. 1936; Moldenke, Known Geogr. Distrib. Verbenac., ed. 1, 38 & 100. 1942; Moldenke, Phytologia 2: 244. 1947; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 197. 1949; Moldenke, Phytologia 5: 132. 1955; Moldenke, Biol. Abstr. 30: 1092. 1956; Moldenke, Résumé 87, 354, & 445. 1959; Moldenke, Résumé Suppl. 16: 5. 1968; Moldenke, Fifth Summ. 1: 147 (1971) and 2: 642 & 857. 1971.

An isotype of this variety, G. Gardner 3370, deposited in the herbarium of the Naturhistorisches Museum in Vienna, was photographed there by Macbride as his type photograph number 34297.

The plant is described by recent collectors as an herb, 15 cm. tall, growing on upland bushy campos or in cerrado, flowering in October. Irwin & Soderstrom refer to it as "locally common in cerrado on foothills", at 300--400 meters altitude. The corollas are said to have been "rose" colored on N. T. Silva 57733 and "light-violet" on Irwin & Soderstrom 6739.

Additional citations: BRAZIL: Goiás: G. Gardner 3370 [Macbride photos 34297] (F--photo of isotype, N--photo of isotype, Rb--photo of isotype, W--photo of isotype); N. T. Silva 57733 (N). Mato Grosso: Irwin & Soderstrom 6739 (Ca--1336467, N, W--2454330).

CASSELLIA GLAZIOVII (Briq. & Moldenke) Moldenke

Synonymy: Timotocia glaziovii Briq. & Moldenke ex Moldenke in Fedde, Repert. Spec. Nov. 39: 145--146. 1936.

Additional & emended bibliography: Hill & Salisb., Ind. Kew. Suppl. 10: 233. 1947; Moldenke, Biol. Abstr. 30: 1092. 1956; G. Taylor, Ind. Kew. Suppl. 12: 30. 1959; Moldenke, Phytologia 7: 351. 1961; Moldenke, Fifth Summ. 1: 147 (1971) and 2: 642 & 857. 1971.

The actual type of this species, J. E. Pohl 2158, deposited in the herbarium of the Naturhistorisches Museum in Vienna, was photographed there by Macbride as his type photograph number 34296. His type photograph number 24626 depicts a specimen of Glaziou 21890 deposited in the herbarium of the Conservatoire et Jardin Botaniques in Geneva as well as a specimen which is C. serrata Nees & Mart.

Macedo encountered this plant on "campestre da serra", the corollas "roxas" in color, and flowering in October.

Material of C. glaziovii has been misidentified and distributed in some herbaria as belonging in the Acanthaceae, a very understandable mistake.

Additional citations: BRAZIL: Goiás: Burchell 8140 (G); Glaziou 21890 [Macbride photos 24626, in part] (N--photo, W--photo); J. E. Pohl 2158 [Macbride photos 34296] (F--photo of type, N--photo of type, Rb--photo of type, W--photo of type). Minas Gerais: Macedo 2655 (N, W--2025585).

CASSELLIA HASSLERI Briq.

Synonymy: Timotocia hassleri (Briq.) Moldenke in Fedde, Repert. Spec. Nov. 39: 141--142. 1936.

Bibliography: Briq. in Chod. & Hassl., Bull. Herb. Boiss., ser. 2, 4: 1165 & 1166. 1904; Briq. in Chod. & Hassl., Pl. Hassler. 2: 501 & 502. 1904; Prain, Ind. Kew. Suppl. 3: 37. 1908; M. Kunz, Anatom. Untersuch. Verb. 61. 1911; Moldenke, Prelim. Alph. List Invalid Names 14. 1940; Moldenke, Lilloa 6: 433--434 (1941) and 8: 427. 1942; Moldenke, Alph. List Invalid Names 12. 1942; Moldenke, Known Geogr. Distrib. Verbenac., ed. 1, 41 & 100. 1942; Moldenke, Phytologia 2: 244. 1947; Hill & Salisb., Ind. Kew. Suppl. 10: 233. 1947; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 99 & 197. 1949; Moldenke, Résumé 115, 354, & 445. 1959; Moldenke, Fifth Summ. 1: 185 (1971) and 2: 642 & 857. 1971; Troncoso, Darwiniana 18: 387 & 408. 1974.

The type specimen of this species, Hassler 7889, deposited in the herbarium of the Conservatoire et Jardin Botaniques in Geneva, was photographed there by Macbride as his type photograph number 24627. Hassler describes the plant as a small shrub, 20--40 cm. tall, the "petals" rose-colored, and encountered it in sandy fields, on high plateaus, and on barrancas, flowering in February and November.

Additional citations: PARAGUAY: Hassler 7889 [Macbride photos 24627] (F--photo of type, N--photo of type, Rb--photo of type, S--isotype, W--photo of type); Rojas s.n. [Hassler 10760; Herb. Osten 20409] (Ca--950623, M1, N, N, S, Ug, W--2055461).

CASSELLIA HYMENOCALEX Briq.

Synonymy: Timotocia hymenocalyx (Briq.) Moldenke in Fedde, Repert. Spec. Nov. 39: 139--141. 1936.

Bibliography: Briq. in Chod. & Hassl., Bull. Herb. Boiss., ser. 2, 4: 1165--1166. 1904; Briq. in Chod. & Hassl., Pl. Hassler. 2: 501--502. 1904; Prain, Ind. Kew. Suppl. 3: 37. 1908; Moldenke in Fedde, Repert. Spec. Nov. 39: 139--141. 1936; Moldenke, Prelim. Alph. List Invalid Names 14. 1940; Moldenke, Lilloa 6: 434 (1941) and 8: 427. 1942; Moldenke, Alph. List Invalid Names 12. 1942; Moldenke, Known Geogr. Distrib. Verbenac., ed. 1, 47, 74, & 100. 1942; Moldenke, Phytologia 2: 244. 1947; Hill & Salisb., Ind. Kew. Suppl. 10: 233. 1947; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 99, 163, & 197. 1949; Moldenke, Résumé 116, 214, 354, & 445. 1959; Moldenke, Fifth Summ. 1: 185 & 356 (1971) and 2: 642 & 857. 1971; Troncoso, Darwiniana 18: 385--387 & 408, fig. 31. 1974.

Illustrations: Troncoso, Darwiniana 18: 386, fig. 31. 1974.

The type specimen of this species, Hassler 7637, deposited in the herbarium of the Conservatoire et Jardin Botaniques in Geneva, was photographed there by Macbride as his type photograph number 24628. Hassler describes the plant as a subshrub, 20--50 cm. tall, with "rose"-colored "petals", and found it growing at the edge of woods, flowering in October.

Additional citations: PARAGUAY: Hassler 7637 [Macbride photos 24628] (Ca--935073--isotype, F--photo of type, M1--isotype, N--

isotype, N--photo of type, Rb--photo of type, S--isotype, W--2055304--isotype, W--photo of type).

CASSELLIA INTEGRIFOLIA Nees & Mart.

Synonymy: Timotoica integrifolia (Nees & Mart.) Moldenke in Fedde, Repert. Spec. Nov. 39: 135, sphalm. 1936. Casselia subintegerrima Nees ex Moldenke in Fedde, Repert. Spec. Nov. 39: 135, in syn. 1936. Timotocia integrifolia (Nees & Mart.) Moldenke, Prelim. Alph. List Invalid Names 14. 1940. Casselia semiserata Hort. ex Moldenke, Prelim. Alph. List Invalid Names 14, in syn. 1940.

Additional bibliography: Schau. in A. DC., Prodr. 11: 527. 1847; Schau. in Mart., Fl. Bras. 9: 173--174 & 311. 1851; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 449. 1893; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 158. 1894; T. Peckolt, Bericht. Deutsch. Pharm. Gesell. 14: 465. 1904; Solered., Syst. Anat. Dicot. Ergänzt. 255. 1908; M. Kunz, Anatom. Untersuch. Verb. 61. 1911; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 449. 1946; Hill & Salisb., Ind. Kew. Suppl. 10: 43 & 233. 1947; Moldenke, Phytologia 2: 244--245. 1947; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 449. 1960; Moldenke, Phytologia 7: 351. 1961; Moldenke, Résumé Suppl. 16: 27. 1968; Moldenke, Fifth Summ. 1: 147, 356, 423, & 487 (1971) and 2: 642, 857, & 968. 1971.

Recent collectors describe this plant as an herb and have found it growing in cerrado with sandy soil, flowering in November. The corollas are described as having been "rose-lilac" on Hatschbach & Koczicki 33147.

Peckolt (1904) records the species from Alagoas and Pernambuco, as well as from Rio de Janeiro, Brazil, records the vernacular names, "flor de natal", "manacan-anacõn", and "Weinachtsblume", and describes the plant as "eit Strauch mit länglich-lanzettlichen, spitzen Blättern", the flowers pleasantly fragrant, and the corollas white. He notes that "Das Dekokt der Wurzel, 50 g zu 250 g Kolatur, wird esslöffelweise bei Rheumatismus genommen; 10 g des Wurzelpulvers dienen als Abfuhrmittel."

Material of this species has been misidentified and distributed in some herbaria as "Acanthaceae".

Additional citations: BRAZIL: Mato Grosso: Hatschbach & Koczicki 33147 (W--274474, Z). Rio de Janeiro: Riedel & Luschmath 1328 (F--photo, Rb--photo). CULTIVATED: Belgium: M. Martens s.n. [h. b. Brux. 1838] (Br).

CASSELLIA INTEGRIFOLIA var. FISCHERI (Mart.) Moldenke

Synonymy: Duranta fischeri Mart., Flora 21, Beibl. 2: 60. 1838. Casselia diversifolia Regel, Ind. Sem. Hort. Petrop. 46. 1857. Timotocia integrifolia var. fischeri (Mart.) Moldenke in Fedde, Repert. Spec. Nov. 39: 136--137. 1936.

Additional & emended bibliography: Mart., Flora 21, Beibl. 2: 60. 1838; Schau. in Mart., Fl. Bras. 9: 272. 1951; Regel, Ind. Sem.

Hort. Petrop. 46. 1857; Hill & Salisb., Ind. Kew. Suppl. 10: 43. 1947; Moldenke, Phytologia 2: 245 (1947) and 7: 351--352. 1961; Moldenke, Fifth Summ. 1: 356, 423, & 487 (1971) and 2: 642 & 857. 1971.

An isotype of this variety, Lucae s.n., deposited in the herbarium of the Botanisches Museum in Munich, was photographed there by Macbride as his type photograph number 20347.

Additional citations: CULTIVATED: Belgium: M. Martens s.n. [h. b. lov. 1841] (Br). Germany: Lucae s.n. [Herb. Kummer; Martius 1281; Macbride photos 20347] (F--684154--photo of isotype, N--photo of isotype, W--photo of isotype). Russia: Herb. Hort. Bot. Petrop. s.n. (F--photo, Rb--photo).

CASSELLIA MANSOI Schau.

Synonymy: Timotocia mansoi (Schau.) Moldenke in Fedde, Repert. Spec. Nov. 39: 142--143. 1936. Casselia mansii Schau. ex Moldenke, Prelim. Alph. List Invalid Names 14, in syn. 1940. Casselia peduncularis Mart. ex Moldenke, Prelim. Alph. List Invalid Names 14, in syn. 1940.

Additional bibliography: Schau. in A. DC., Prodr. 11: 527. 1847; Schau. in Mart., Fl. Bras. 9: 175, 307, & 311, pl. 32, fig. 2. 1851; Bocq., Adansonia, ser. 1, 2: 125 (1862) and 3: 238. 1863; Bocq., Rev. Verbénac. 125, 126, & 238. 1863; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 449. 1893; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 158. 1894; Briq. in Chod. & Hassl., Bull. Herb. Boiss., ser. 2, 4: 1166. 1904; Briq. in Chod. & Hassl., Pl. Hassler. 2: 502. 1904; M. Kunz, Anatom. Untersuch. Verb. 61 & 78, fig. 4. 1911; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 449. 1946; Hill & Salisb., Ind. Kew. Suppl. 10: 233. 1947; Moldenke, Alph. List Invalid Names Suppl. 1: 4. 1947; Moldenke, Phytologia 2: 245. 1947; F. C. Hoehne, Ind. Bibl. & Num. Pl. Col. Com. Rondon 350. 1951; R. C. Foster, Contrib. Gray Herb. 184: 170. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 449. 1960; Moldenke, Phytologia 7: 352. 1961; Moldenke, Fifth Summ. 1: 147, 181, & 423 (1971) and 2: 642 & 857. 1971; Troncoso, Darwiniana 18: 387. 1974.

Illustrations: Schau. in Mart., Fl. Bras. 9: pl. 32, fig. 2. 1851; M. Kunz, Anatom. Untersuch. Verb. 78, fig. 4. 1911.

Recent collectors describe this plant as "quite prostrate" and have found it growing in sandy damp soil and in "open country", at altitudes of 142--200 meters, flowering in February. The corollas are said to have been "blue" on Cárdenas 4406. Lankester records the vernacular name, "cha de Minas", and reports the plant being used as a diuretic and "local remedy" in Mato Grosso.

Additional citations: BRAZIL: Mato Grosso: F. C. Hoehne Com. Rondon 4465 (Sp--31980); Lankester s.n. [June 14th, 1937] (K); Silva-Manso s.n. [Martius 1025; Macbride photos 24629] (F--photo of isotype, N--photo of isotype, Rb--photo of isotype). Minas Gerais: A. P. Duarte 7542 [Herb. Brad. 27653] (N). BOLIVIA: El Beni: Cárdenas 4406 (N, W--1989872). MOUNTED ILLUSTRATIONS:

Schau. in Mart., Fl. Bras. 9: pl. 32, fig. 2. 1851 (N, Z).

CASSELLIA ROSULARIS Sandw., Kew Bull. Misc. Inf. 1929: 124--125. 1929.

Synonymy: Timotocia rosularis (Sandw.) Moldenke in Fedde, Repert. Spec. Nov. 39: 150--151. 1936.

Additional & emended bibliography: Sandw., Kew Bull. Misc. Inf. 1929: 124--125. 1929; Fedde & Schust. in Just, Bot. Jahresber. 57 (2): 401. 1938; F. C. Hoehne, Plant. Subst. Veg. Tox. 40, fig. 16 G & 48, fig. 21. 1939; Hill & Salisb., Ind. Kew. Suppl. 10: 233. 1947; Anon., Kew Bull. Gen. Index 1929-1956, 67. 1959; Moldenke, Phytologia 7: 352. 1961; Moldenke, Fifth Summ. 1: 147 (1971) and 2: 642 & 857. 1971.

Illustrations: F. C. Hoehne, Plant. Subst. Veg. Tox. 40, fig. 16 G & 48, fig. 21. 1939.

Macedo encountered this plant "in cerrado em local aberto". Archer & Gehrt tell us that the flowers have a Canela-like odor. The corollas are said to have been "lilac" in color on Macedo 2658 and "rose" on Archer & Gehrt s.n. The plant has been found flowering in September and October.

Additional citations: BRAZIL: Goiás: Macedo 2658 (N, W--2025587). Mato Grosso: Archer & Gehrt s.n. (Sp--36320); Collenette 185 (F--photo of type, Rb--photo of type).

CASSELLIA SERRATA Nees & Mart.

Synonymy: Timotocia serrata (Nees & Mart.) Moldenke in Fedde, Repert. Spec. Nov. 39: 137. 1936. Casselia brasiliensis Nees ex Moldenke in Fedde, Repert. Spec. Nov. 39: 137, in syn. 1936. Casselia serratifolia Nees ex Moldenke in Fedde, Repert. Spec. Nov. 39: 137, in syn. 1936.

Additional & emended bibliography: Schau. in Mart., Fl. Bras. 9: 174 & 311. 1851; Bocq., Adansonia, ser. 1, 3: [Rev. Verbénac.] 238. 1863; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 449. 1893; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 158. 1894; Junell, Symb. Bot. Upsal. 4: 19, fig. 25, & pl. 1, fig. 1. 1934; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 449. 1946; Hill & Salisb., Ind. Kew. Suppl. 10: 43 & 233. 1947; Moldenke, Phytologia 2: 246. 1947; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 449. 1960; Rickett & Stafleu, Taxon 9: 84. 1960; Moldenke, Phytologia 7: 352. 1961; Angely, Fl. Anal. & Fitogeogr. Est. S. Paulo, ed. 1, 4: 830 & iv. 1971; Moldenke, Fifth Summ. 1: 147 & 423 (1971) and 2: 642 & 857. 1971; Rouleau, Taxon Index Vols. 1-20, part 1: 72. 1972; Stafleu, Internat. Code Bot. Nom. 354. 1972; Troncoso, Darwiniana 18: 387 & 408. 1974.

Illustrations: Junell, Symb. Bot. Upsal. 4: 19, fig. 25, & pl. 1, fig. 1. 1934.

A specimen of Glaziou 13060, deposited in the herbarium of the Conservatoire et Jardin Botaniques in Geneva, was photographed there by Macbride as his type photograph number 24626, even though it is not part of any type collection, and on the same photograph

is Glaziou 21890, which is C. glaziovii (Briq. & Moldenke) Moldenke, but, again, is not a type collection.

Additional citations: BRAZIL: Bahia: Wied-Neuwied s.n. (F--photo of isotype, Rb--photo of isotype). Minas Gerais: Glaziou 13060 [Macbride photos 24626, in part] (N--photo, W--photo).

CASSELLIA VERONICAEOFOLIA Cham.

Synonymy: Timotocia veronicaefolia (Cham.) Moldenke in Fedde, Repert. Spec. Nov. 39: 146. 1936. Casselia veronicifolia Cham. apud Hill & Salisb., Ind. Kew. Suppl. 10: 233, in syn. 1947. Timotocia veronicifolia (Cham.) Moldenke apud Hill & Salisb., Ind. Kew. Suppl. 10: 233. 1947.

Additional & emended bibliography: Schau. in A. DC., Prodr. 11: 528. 1847; Schau. in Mart., Fl. Bras. 9: 175--176 & 311. 1851; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 449. 1893; M. Kunz, Anatom. Untersuch. Verb. 61--62. 1911; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 449. 1946; Moldenke, Phytologia 2: 246. 1947; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 449. 1960; Moldenke, Phytologia 7: 352. 1961; Moldenke, Résumé Suppl. 16: 19 & 27. 1968; Moldenke, Fifth Summ. 1: 447 & 424 (1971) and 2: 642 & 857. 1971.

Irwin & Soderstrom 7147 is said to have had its corollas "light violet" in color when fresh and "falling off by midday". These collectors found the plant to be "occasional" among campo grasses, at an altitude of 800--1000 meters, flowering in October.

Additional citations: BRAZIL: Goiás: Irwin & Soderstrom 7147 (Au--250268). Minas Gerais: Sellow 1518 [Macbride photos 17577] (F--663056--photo of type, F--photo of isotype, N--photo of type, Rb--photo of type).

CASSELLIA ZELOTA (Moldenke) Moldenke

Synonymy: Timotocia zelota Moldenke in Fedde, Repert. Spec. Nov. 39: 133--134. 1936.

Bibliography: Moldenke in Fedde, Repert. Spec. Nov. 39: 133--134. 1936; Moldenke, Geogr. Distrib. Avicenn. 26. 1939; Moldenke, Known Geogr. Distrib. Verbenac., ed. 1, 38 & 100. 1942; Moldenke, Phytologia 2: 246. 1947; Hill & Salisb., Ind. Kew. Suppl. 10: 233. 1947; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 197. 1949; Moldenke, Phytologia 5: 132. 1955; Moldenke, Biol. Abstr. 30: 1092. 1956; Moldenke, Résumé 87, 354, & 445. 1959; G. Taylor, Ind. Kew. Suppl. 12: 30. 1959; Moldenke, Fifth Summ. 1: 447 (1971) and 2: 642 & 857. 1971.

Additional citations: BRAZIL: Minas Gerais: Blanchet 3133 (F--photo of isotype, Rb--photo of isotype).